



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(YA172327) WHITEVILLE NC
Machine Id
118004
Component
Diesel Engine
Fluid
PETRO CANADA 15W40 (6 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0110484	GFL0083349	GFL0083344
Sample Date		Client Info		17 Jul 2024	13 Mar 2024	26 Jun 2023
Machine Age	mls	Client Info		17909	1742	1742
Oil Age	mls	Client Info		600	200	600
Filter Age	mls	Client Info		0	200	0
Oil Changed		Client Info		Changed	N/A	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>90	17	13	12
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>2	0	0	0
Silver	ppm	ASTM D5185m	>2	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	100	96	110
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

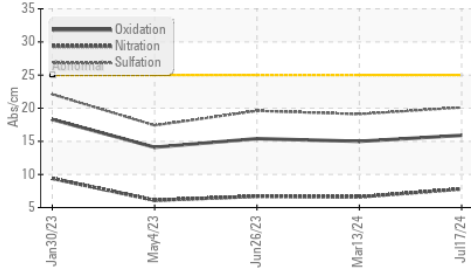
Silicon	ppm	ASTM D5185m	>25	13	11	8
Potassium	ppm	ASTM D5185m	>20	2	1	2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.8	6.6	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	19.1	19.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

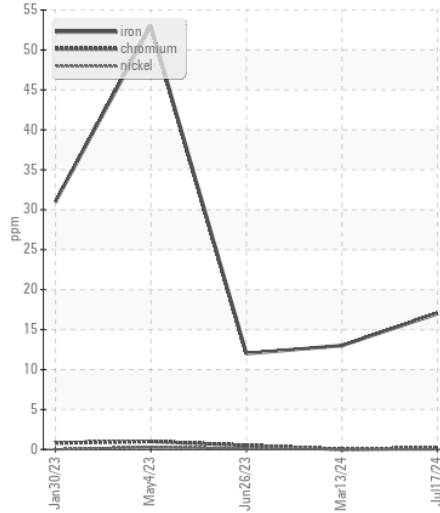
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		42	<1	<1
Boron	ppm	ASTM D5185m		37	35	45
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		44	43	42
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		686	694	710
Calcium	ppm	ASTM D5185m		1295	1222	1365
Phosphorus	ppm	ASTM D5185m		940	932	998
Zinc	ppm	ASTM D5185m		1098	1123	1239
Sulfur	ppm	ASTM D5185m		3308	3214	3873
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.9	15.0	15.4
Base Number (BN)	mg KOH/g	ASTM D2896		8.0	8.2	8.7
Visc @ 100°C	cSt	ASTM D445		12.9	13.5	13.4

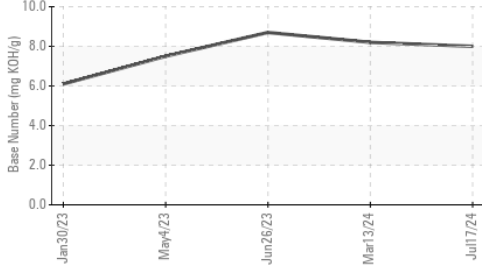
FT-IR (Direct Trend)



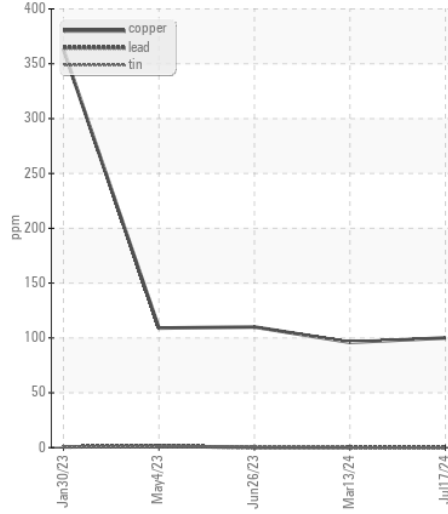
Ferrous Alloys



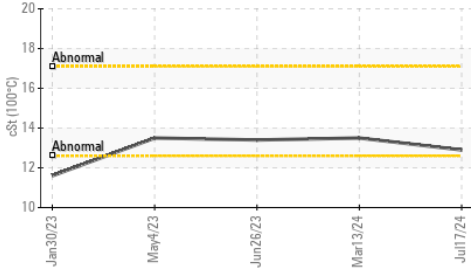
Base Number



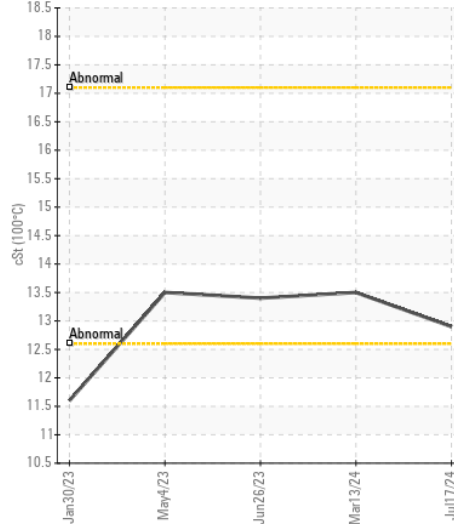
Non-ferrous Metals



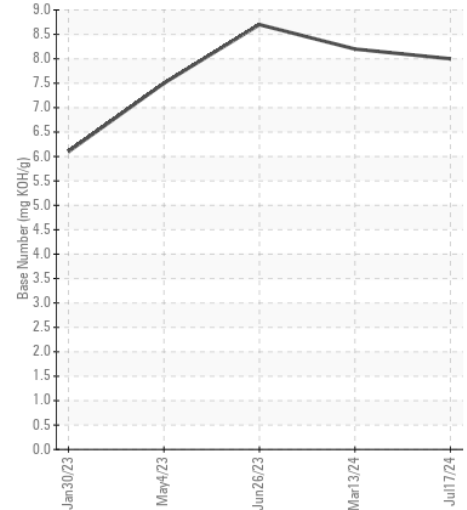
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110484
Lab Number : 06241345
Unique Number : 11130179
Test Package : FLEET

Received : 19 Jul 2024
Tested : 20 Jul 2024
Diagnosed : 20 Jul 2024 - Wes Davis

GFL Environmental - 108 - Whiteville
 5240 James B White Hwy South
 Whiteville, NC
 US 28472

Contact: Victor McGee
 victor.mcgee@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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F: